

Governmental Incentivization for SMEs' Engagement in Disaster Resilience in Southeast Asia

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Abstract: The resilience of Small and Medium Enterprises (SMEs) is regarded as a precondition of sustainable development both at the local and the national levels, as they are the providers of the main portion of jobs in the market, contributing an average between 57 to 97% of national employment in the ASEAN countries. At the same time, SMEs are the most vulnerable businesses as a result of financial, technological, and administrative limitations, where the majority of SMEs lack even basic knowledge on disaster preparedness and response techniques. The current study argues that governments have a particularly important role in mobilizing SMEs disaster resilience through developing adequate policies and legislation, and through providing the necessary infrastructure and investment climate for SMEs to thrive, focusing particularly on Indonesia, the Philippines and Thailand. The research tries to present the current level of SME involvement in each of the three countries and to identify relevant gaps and opportunities. This paper does not include an extensive list of recommendations but tries to focus on some of the basic techniques which governments can and should employ in their efforts towards economic and community resilience, arguing that a number of appropriate incentives would be beneficial in engaging SMEs as one of the vital parts of private sector. structured abstracts: 1) Introduction; 2) Methods; 3) Results; 4) Conclusions and implication

Keywords: *Small and Medium Enterprises (SME), Private Business, Disaster Response, Disaster Preparedness and Resilience, Government Incentives, Southeast Asia, Business Continuity.*

1. Introduction

The resilience of Small and Medium Enterprises (SMEs) is regarded as a precondition of sustainable development both at the local and the national levels, as they are the providers of the main portion of jobs in the market, contributing an average between 57 to 97% of national employment in the ASEAN countries (Villarroel et al., 2013; ADPC, 2017). Furthermore, they operate in various economic sectors both in rural and urban areas, and have the advantage of developing close links with the community (ASEAN and Secretariat, 2015; ADPC, 2017). Therefore, the ability of SMEs to respond to disasters is crucial for the recovery of the community economic fabric in affected areas. At the same time, SMEs are the most vulnerable businesses due to financial, technological, and administrative limitations (Picard, 2017). Developing innovative disaster risk measures in planning, such as utilizing cutting-edge technology, are difficult to achieve due to insufficient funds and capacities (UNISDR, 2013). Most of the time SMEs lack even basic knowledge on disaster prevention and response techniques, such as the development of Business Continuity Plans (BCPs) or conducting safety and first aid trainings for their staff (Samantha, 2018; Zhang, Lindell, & Prater, 2009).

A particular problem for engaging SMEs in disaster resilience efforts represents the fact that a large number of companies in Southeast Asia function in the informal economy to avoid paying taxes. In the aftermath of disasters those companies are excluded from government support programmes, rendering them the most vulnerable group of SMEs (Villarroel et al., 2013). Having in mind SMEs importance for community and economic resilience, and at the same time their high vulnerability, such businesses require special support from the government in strengthening their resilience to disasters. Governments have a particularly important role in mobilizing SMEs disaster resilience through developing policies and legislation and through providing the necessary infrastructure and investment climate for SMEs to thrive, as well as through direct intervention during pre and post disaster activities (Ballesteros & Domingo, 2015). The current paper will, therefore, focus on some of the ways local and national governments can support and regulate further this process through providing incentives for SMEs to engage in DRR, especially in the developing countries of the Southeast Asia (SEA) region.

The paper will focus on three countries from SEA, namely Indonesia, the Philippines and Thailand, presenting the current level of SME involvement in each of them. Some gaps and opportunities have also been identified and discussed later in the text. This paper does not include an extensive list of recommendations but tries to focus on some of the basic techniques which govern-

ments can and should employ in their efforts towards economic and community resilience, arguing that a number of appropriate incentives would be beneficial in engaging this vital and vulnerable part of the private sector, which are the SMEs.

2. Focus on Southeast Asia, SMEs, and Incentives

Southeast Asia (SEA), as the most natural disaster-prone region in the world, is continuously suffering from a range of different intensity disasters (Gupta, 2010; Rampangilei, 2016). As its location sits in several plates and lies between two oceans (Indian and Pacific Oceans), this region has been prone to earthquakes, volcano eruptions, tsunami and seasonal typhoons. More than 50% of global disaster mortalities occurred in SEA in the ten-year period between 2004 and 2014 and caused economic losses of US\$ 91 billion. Within this region, Indonesia, the Philippines and Thailand are among the countries that have experienced some of the gravest economic damages based on their Average Annual Economic Loss (AAL), amounting to respectively US\$ 926 million, US\$284 million, and US\$272 million (Gupta, 2010). In order to seek ways to diminish the economic losses caused by disasters in these volatile conditions, the current research will focus namely on the above mentioned countries. This research has opted to focus on small and medium-size enterprises, or SMEs, because of their huge significance in the economies of these countries and their links to communities. SMEs represent around 88-99% of private companies and provide significant percent of all national employment (around 52-97%) within all economic sectors in both rural and urban areas in the region. SMEs contribute to 30-35% of GDP on average, yet their share in total exports is still small (about 10-30%), which means they require additional support for development and promotion towards strengthening their business (ADPC, 2017).

Furthermore, SMEs are important for the creation of social capital in restoring the ruptured social fabric in communities after disaster. By reopening local businesses and making spaces for social bonding in affected communities, SMEs attract people back to the area, as well as new investment, necessary to rebuild the affected areas. In a wider context, strong SMEs can also endorse national resilience to shocks by expanding and diversifying the domestic economy. Thus, reducing the sole dependency on large companies or only on few sectors, and engaging SMEs has the potential to improve the protection of a wide-base of labor force from certain shocks in specific sectors and fluctuations in international markets (Villarroel et al., 2013). "SME" has a different definition in the three countries of focus, generally categorising them based on their capital size. Indonesia and the Philippines categorise SME into three types: *micro*, *small*,

and *medium* enterprises. Meanwhile, Thailand only has two categories, which are *small* and *medium* enterprises. In addition, the Philippines and Thailand add more variables in defining SMEs, such as the number of workers involved in the business. Table 1 below is used to give more clear indication of what SME means in the different countries:

Table 1: (M)SME Definition across SEA countries (Picard, 2017)

Countries	Capital Size (USD)			Worker Size		
	Micro	Small	Medium	Micro	Small	Medium
Indonesia	<3,740	3,740-37,400	37,400-74,800	-	-	-
Philippines	<63,000	63,000-317,000	317,000-21,200,000	<9	1-9	9-99
Thailand (Services & Manufacture)	-	<1,561,000	1,561,000-6,244,000	-	<50	50-200

The 2004 tsunami in Indonesia heavily affected the private sector (78% of total destruction), and 104,500 SMEs were completely wiped-out (Ismail et al., 2018). Meanwhile, as a result of the 2011 Thailand floods, around 557,637 business entities, consisting of 90% SMEs, were hit, resulting in 2.3 million people losing their jobs (Perwaiz, 2015; Auzzir, Haigh, & Amaratunga, 2018). Lastly, in the Philippines, the Ondoy typhoon in 2009 caused a total of PhP 111.4 billion in damages and production losses in the private sector where it was mostly SMEs that were hit the hardest in the impacted areas (Ballesteros & Domingo, 2015). The direct impacts of disasters affecting SMEs include the complete/partial destruction of assets and stock, insecurity of business data and records, and threats to employees' lives and livelihoods. Meanwhile, the indirect impacts consist of interruption of the normal production, caused by assets damage and trapped employees; interruption of products and service delivery, caused by blocked roads; losing contact with markets, caused by damage of communication infrastructure; and supply chain disruption, caused by interruption of products supplied from upstream industries and shrinkage of products demanded by the downstream industries or target markets. From a macroeconomic perspective, this will also cause higher interest rates, labour shortages, and reduced demand

of goods and services (UNISDR, 2015). SMEs' willingness to invest in innovative activities related to disaster preparedness can assist the company to protect its own business (e.g. its vital assets and records). Engagement in disaster management could also provide for a stable environment for business (e.g. reduces disaster risk, protects its resources, and reduces social and economic vulnerability). Such initiatives can protect whole or partial value chains, and improve conditions for customers and staff (e.g. employees' families, property, health and safety risks). Some other benefits include building reputation and demonstrating good citizenship; enhancing government relationships, as well as inter-business relationships; creating possibilities to influence stakeholder perceptions; improving staff motivation and retention; and providing new business opportunities that create shared value. In the longer term, this will ensure their business continuity, competitiveness and sustainability (Izumi & Shaw (ed.), 2015; UNISDR 2015).

There are a number of possible mechanisms for disaster resilience of relevance to SMEs, including corporate social responsibility (CSR), developing business continuity plans (BCP) and joining partnerships with the public sector (PPP). These mechanisms increase SMEs' internal protection and have the potential to contribute to wider community resilience. A step forward in this direction could be SMEs' direct assistance to the affected societies through donations, or awareness raising initiatives. Lastly, enterprises may link their production and services directly to disaster resilience and become suppliers to humanitarian actors. An example is the production of special earthquake-resistant laminated glass for buildings, produced by companies and widely used in construction in Japan (UNISDR, 2013). To promote, initiate and support SMEs' engagement in disaster preparedness and resilience, governments need to provide incentives, which would be relevant for the targeted companies. "Incentives" are generally defined as ways to encourage people/groups to change their behaviour or practices, as a result of receiving a reward for performance improvement (ADB, 2016). In this paper, "incentive" is any effort to persuade (inducement) SMEs in taking action in improving disaster resilience, for themselves and for the affected community, provided prior to or in the aftermath of disaster events.

2. Current level of SMEs' Engagement

Before suggesting some techniques for governments to incentivize the involvement of SMEs in disaster management, it is necessary to discuss the current level of SME engagement and government initiative within the three nations of interest. For ease, the data is represented in Table 2 and Table 3 below:

Table 2: Current Condition Disaster Risk Management (DRM)
Policy Framework for SME (ADPC, 2012)

	Indonesia	Philippines	Thailand
Extent of Institutional Application of DRM in relation to SMEs	SME and private sector needs are not considered specifically in the policy and implementation processes for DRM	DRM institutions are established as coordinating mechanism to mainstream the issues into government across sectors and at all levels	DRM mechanisms are supported by government financial institutions with specific mandates for SMEs.
Extent of DRM application in SME Development and Promotion	The legislative and policy mandates of the DRM and CCA systems, and the SME promotion system, do not currently interact to any significant extent at either a policy or operational level	MSME development already provides many opportunities for information sharing, training and incentives for undertaking risk assessments	OSMEP and other SME support institutions demonstrated a high capacity to support SME disaster recovery following the 2011 floods.

Table 3: SMEs Disaster Resilience Survey (ADPC, 2012)

	Indonesia	Philippines	Thailand
Company BCP Availability	14%	6%	21.50%
Disaster Resilience Training	10%	41%	33%
Type of Disaster resilience training needs	Awareness Training	Disaster Preparedness (including drills)	Emergency response, evacuation, risk assessment, and emergency communication
Needs for Govt. Provision	Provision of technical assistance, consultancy services	SME financial incentives from Govt.	Disaster Insurance Mechanisms

In a 2016 survey, conducted by the University of Indonesia among 400 representatives of small and medium business, respondents were asked about the type of coping mechanism they use to deal with business disruption. Sixty-three percent of the companies replied that they are using own savings, 34% were managing through loans, 24% with support from family, and 21% by working more. Thirteen percent of all, reported that they did not have any coping mechanism (Mardanugraha, ADPC, 2016). This picture hardly represents only the situation in Indonesia. The scenario where SME owners look for funds from relatives and friends or pawn personal items to recover from disasters is a common one in Southeast Asia. A survey conducted in Indonesia, Viet Nam, The Philippines and Thailand revealed that SMEs often resort to loans from friends and family or informal financing as a result of a combination between a tradition of self-reliance and the lack of official mechanisms that provide affordable and flexible risk financing (ADPC, 2017, Regional Synthesis Report). Such methods can support recovery in a one-time crisis, but in a region subject to constant and complex disasters it cannot be a sustainable mechanism, and it could even exacerbate already existing issues, destabilizing the economy in the whole community.

When typhoon Haiyan devastated the Philippines, the assessment conducted by the Employers' Confederation of the Philippines (ECOP) showed that businessmen relied mainly on their own resources/savings or loans from private/informal lenders. The lending rate of informal institutions was twice as high, or even higher, than the one offered by the bank, but the required collateral and piles of complicated supportive documentation of banks and formal financing institutions represented barriers to SMEs. Compared to them, informal lenders could provide loans quickly, which was quite important for SMEs' rapid resuming of activities, despite of the higher interest rates (ILO & ECOP, 2015). This is further confirmed and aggravated by the fact that in the developing economies of Southeast Asia a large percent of SMEs bypass official registration to avoid paying taxes and thus do not exist in the official registers of the local and national government. As a consequence, when a crisis hits, these SMEs do not receive financial support from the government, as they are non-existent as a legal entity (Villaruel et al., 2013). This comes to show the importance of government action to engage SMEs through providing incentives for them to register and employ risk resilience mechanisms to secure their own survival.

SMEs may not be able to build disaster resilience without support from the government. Governments' assistance is essential in building capacity in SMEs to conduct preliminary risk assessments and develop risk mechanisms, such as BCP, through both conventional and unconventional education (ADPC, 2015). Business Continuity Plan or BCP is a set of documented procedures that guide organizations to respond, recover, resume and restore their business to a pre-de-

financed level of operation, following disruptions such as disasters (Ono, 2014). BCP is a mechanism very much oriented towards company survival, but its proper implementation can have impact on a much wider set of actors, benefiting communities at large. BCP is relevant to companies of all sizes and business areas and are considered one of the cheapest forms of insurance which can be produced at minimal cost (APEC, 2014).

At the same time, even though it has been estimated that 75 % of companies without a BCP fail within 3 years of a disaster (UNDP PRRP, 2017), this practice is still largely absent from company policies. The role of national and local governments here is especially crucial, as the majority of studies show that large percentage of small and medium companies are not aware of the concept at all or do not know how to develop BCPs. Thus, for instance, the 2016 survey, conducted by the University of Indonesia, showed that 62 % of the participating companies had not heard of BCP and 32% did not know how to establish one. To add to this, of those interviewed, only 10% of respondents had ever attended a workshop or training explaining the concept of BCP and only 9% had attended a training related to general DRM (Mardanugraha, ADPC, 2016). The rate of SMEs who had a written BCP was also low in the Philippines (ADPC & DIT, 2016). Findings also showed that awareness levels of Thai SMEs on business continuity planning (BCP) is relatively low compared to other Southeast Asia countries (ADPC, 2015). The absence of BCP was assessed to be a common condition among SEA Countries.

The results of the survey clearly indicated the need for increased dissemination of information, training on BCP preparation, and general awareness on the need for BCP. Some of the respondents also mentioned that it was difficult for them to develop a BCP as they were linking it to higher costs and resource capacity (ADPC & DIT, 2016). Some efforts have been taken by the administration of the three mentioned countries. For example, the Government of Thailand tried to promote the adoption of BCP, when in 2015, the Department of Disaster Prevention and Mitigation, (DDPM) as the nation's focal point to carry out disaster management, has revised the National Disaster Management Plan, incorporating policies for encouraging the adoption of BCP. It was indicated by the Office of Public Sector Development Commission (OPDC) that the government agencies must establish a team to oversee and protect critical business activities in the midst of a disaster (ADPC, 2015). These and other efforts, however, still have a limited effect and outreach and have not reached the desired levels of SME preparedness. Mutual aid agreements among organizations for response during and after disasters (such as privately-run emergency teams, fire brigades, search and rescue teams and mutual help associations), could be very beneficial for

small and medium companies as those would allow for sharing the burden of additional costs and human capital. However, in the three discussed countries, it was found that such mechanisms mostly do not yet exist (63% in Indonesia). Such support mechanisms for collaboration so far occur only sporadically in some places as found by the ADPC survey report (ADPC, 2017).

4. Government Incentivization Mechanisms

SMEs often see inclusion of disaster risk measures as additional cost and effort. Governments, therefore, have a crucial role in developing enabling environment and adequate incentives for SMEs to engage in disaster management. These incentives generally fall into two types: financial and non-financial. Financial incentives include grants (intergovernmental, or government to person or company), tax credits, subsidies, discounts (on prices or insurance premiums), conditional cash transfers or vouchers, bonds and sureties, access to concessional loans or credits, and others. Meanwhile, non-financial incentives include, but are not limited to, technical capability and capacity building (providing training for building risk assessment: training of tradespeople in disaster-resilient construction, resulting in access to knowledge and access to construction opportunities); access to technology (technology transfer resulting in access to new, locally appropriate disaster-resilient technology); access to information (access to reliable and credible information about current and future risks, resulting in informed risk-sensitive decision making); awards or certification endorsement of good practice (increasing company brand image to society); and participation of stakeholders (including SMEs and community) in decision making (potential favourable influence in disaster resilient development) (ADB, 2016; Gall, Cutter, S.L., & Nguyen, 2014).

Awareness Raising for BCP

Asked what type of incentives would SMEs in Indonesia prefer to see from the government, 57% responded that they would benefit from receiving technical assistance and training to cover the knowledge gap. Awareness is, therefore, an essential part of incentivizing SMEs to develop internal procedures related to risk mitigation. The same survey showed that while the majority of interviewees did not have initial knowledge of BCPs and other relevant mechanisms, 82% of them were willing to participate in a national planning process to support them to prepare for disasters (Mardanugraha, ADPC, 2016), which comes to show the potential for governments and SMEs to work together and improve the relevant policy and processes.

In the Philippines, the Department of Trade and Industry (DTI) cooperated with external organizations, such as ADPC, and with other agencies to launch a project on strengthening the disaster resilience of SMEs. It conducted one Training of Trainers (TOT) in 2016 with 32 participants and four BCP awareness seminars in four regions of its country (DTI website: <https://www.dti.gov.ph/28.06.2018>). The Office of Small and Medium Enterprises Promotion (OSMEP) of Thailand has also been working with ADPC to hold awareness raising forums and workshops on BCP. In 2015, OSMEP established the One Stop Service Center in five provinces across Thailand, and has further cooperated with ADPC in developing technical assistance, knowledge dissemination and capacity building on disaster risk management (ADPC, 2015).

Risk Financing and Insurance

Financing is essential to mitigate and cope with disaster risk. Donors, governments and multilateral development banks have gradually scaled up financial assistance for disaster risk reduction and climate change adaptation (UNESCAP, 2018). Risk financing can be defined as the deployment of financial tools and processes to mitigate the impact of events, which have a negative effect on financial flows required to support an enterprise. Risk financing may be arranged in advance (*ex-ante*) or on the occurrence of an event and identification of the need (*ex-post*). The former is generally considered both more efficient and more effective than the latter (UNESCAP, 2018). Risk insurance is a beneficial risk transfer mechanism to reduce the economic losses of SMEs caused by disasters and help them recover quickly. However, unlike some business insurances, such as fire insurance, business insurance for natural disasters had a quite low purchasing rate. One of the reasons has been the perception of owners that it is an additional unnecessary cost. Another reason is the absence of tailored insurance products relevant to smaller companies' needs. Governments should, therefore, urge insurance companies to develop targeted insurance products with lower premiums. Governments should also take the responsibility to strengthen and promote the adoption and use of this kind of risk insurances (UNESCAP, 2018).

At the same time, the resilience of insurance companies themselves is a factor affecting the overall resilience of SMEs. Facing the destructive 2011 flood in Thailand, under the burden of large insurance payouts, insurers and reinsurers were forced to either withdraw, or increase their premiums, or refuse to renew contracts, in order to protect their own normal business (ADPC, 2015). In this case, Thailand already had set up Insurance Pooling Fund, with the initial capital worth 50,000 million Baht, in accordance with the 2012 Royal Decree on Insurance Pool Fund. The Insurance Fund was established as a legal entity to

assist the insurance industry in providing insurance coverage for various natural disasters, particularly in the event of flood, thus increasing the flexibility and coping capacities of a wide range of businesses (APEC SMEWG, 2014). In Indonesia, insurance for micro businesses was introduced by the Ministry of Cooperatives and SMEs in cooperation with OJK (Financial Services Authority) and Insurance Association. This insurance covers losses caused by natural disasters such as earthquakes, tsunamis, and volcanic eruptions. It is targeted for low-income entities, having a premium of only Rp 40,000 (about 3 USD) per year and maximum coverage of Rp 5,000,000 (about 360 USD). It may be applied for protection of business premises, inventories, and business equipment (Japhta et al., 2016).

Governments can also increase wider community resilience through the promotion of insurance for individual employees. In the 2016 ADPC survey respondents ranked the “employees were unable to go to work” option first on the list of reasons for interrupted business operations (ADPC, 2017). Asia Grandview Hotel in Coron, the Philippines, was regarded as a good example when Typhoon Haiyan struck. All employees were covered by SSS (pension and calamity assistance) insurance, Philhealth (hospitalization), and Pag-IBIG (housing), substantially reducing the negative effects of the disaster on the livelihoods of the employees and on the business itself (ECOP, 2015). Securing and recovery of records should also be promoted to SMEs. Apart from protecting assets and employees, the safekeeping of records is of utmost importance for enterprises. Essential information includes employee records, records of business transactions, customer records, and records of assets (e.g. real-estate property). Losing such information can delay recovery of operations after a disaster (ECOP, 2015).

Soft Loans

In terms of risk retention, soft loans and credits can also represent incentives. Compared with hard loans, soft loans have more flexible terms for repayment and lower interest rates. What is more, going back to the report conducted in the Philippines, complicated and lengthy documentation and screening process is another barrier for SMEs to resort to formal financial agencies for loans or credit. A quicker screening and bureaucracy reduction for loan application can encourage SMEs to return to formal loans for help. In Indonesia, banks were reported to have decreased credit lending interest rate for SMEs to under 10% from about 17% (Mardanugraha, ADPC, 2016). In Thailand, SMEs were provided with loan guarantee of 120 billion Baht in 2011 flood reconstruction by Small Business Credit Guarantee Corporation (SBCG) (State-owned enterprise under the owned enterprise under the supervision of the Ministry of Finance). Soft

loans were also provided to build up flood-protection system for business operators, who installed system for flood protection according with the governmental regulations (APEC, 2014). In the Philippines, after Super Typhoon Yolanda, Enterprise rehabilitation financing program targeted for SMEs' disaster response was launched. The DTI (Department of Trade and Industry) also assisted SMEs to receive loans from government banks.

One particular initiative in the Philippines could be emphasized, where the government established Negosyo Centers under the mandate of Republic Act No. 10644, and the the Go Negosyo Act of 2013. Negosyo Centers provide one-stop service for SMEs, including business registration, information acquisition, and specific governmental support services. This not only improved the public service for SMEs, but also helped integrate more SMEs into formal regulation. The availability of formal company data can contribute to quicker fund distribution when SMEs apply for loans and credits (Picard, 2017).

Tax benefits

Governments can stimulate SMEs to take some disaster resilience actions by tax exemptions. In Thailand, tax exemption and reduction measures were implemented by the Customs Department, Revenue Department, and Board of Investment for private sectors and SMEs, particularly after the 2011 flood (APEC, 2014). The financial support from the government significantly limited the burden on SMEs in the aftermath of the flood. Tax exemption can also be an incentive to encourage more SMEs to engage in disaster preparedness, instead of response, which would be a more effective way to limit disaster-related loss. Last but not least, governments should provide relevant incentives according to specific needs and priorities. For example, in the Philippines, the local government requires enterprises to submit hazard assessment and field investigation reports for the issuance of certificates, as part of assuring implementation of climate change adaptation. Another case is the promotion of cash for work schemes instead of relief goods after disaster, in order to infuse more cash in reviving local industries (Ballesteros, Marife M., & Sonny N. Domingo, 2015).

5. Remaining Challenges and Further Opportunities

Despite of the current level of effort in incentivizing SMEs' engagement in disaster management in the three countries, a number of gaps and challenges still remain. Those gaps are mainly related to lack of coordination among government bodies, as well as the lack of SME registration data, lack of hazard risk data relevant to businesses, and outstanding knowledge and risk financing gaps

(ADPC, 2017). First of all, lack of specifically designated bodies responsible for SME DRM engagement in national administration would mean that there is no institutional memory and continuity of the process. The current legislative and policy mandates of the Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) systems and the SME promotion system in Indonesia, for instance, are not yet interacting significantly at both policy and operational levels (ADPC, 2017). A collaborative mechanism between agencies and bodies is needed in building SMEs resilience to disasters. To add to this, most governmental bodies currently do not have effective monitoring processes to ensure that governmental efforts and programmes have indeed improved SMEs' resilience. This is crucial in making sure that current programs for SMEs within the respective countries have been implemented appropriately and have led to improved conditions for SMEs (ILO & ECOP, 2015).

Secondly, the lack of reliable data on SMEs in the three countries would mean that it will be difficult to assess if policies have reached all relevant enterprises and if the developed policies are adequate and well-suited to the needs of SMEs. This also refers to the common practice of SMEs to avoid official registration and taxation. Thus, it is of great importance that governments develop incentives to specifically target such companies and encourage them to engage with the system. Such incentives should include supportive, rather than just punitive, measures, recognizing the needs and vulnerabilities of informal SMEs (Villarroel et al. 2013). Furthermore, it might be beneficial for governments to profile and engage with SMEs from the same sector in developing specific innovative solutions for DRR to tackle concrete problems. This would also enhance the cooperation among SMEs and with larger businesses, as well as with the public sector. Involving SMEs in public-private partnerships could increase awareness of disaster risk and mutual cooperation, while at the same time provide new business opportunities for SMEs.

Thirdly, there are still remaining gaps in developing and sharing of hazard risk data to be used in risk assessments for SMEs. It is crucial to have data on disaster and climate risk, including risk mapping, to be available for communities and SMEs. This includes data publication which is relevant to businesses and easy to understand by non-experts. The information should also be specific to local areas and should be tailored to target different industry sectors. In addition, cross-referencing local with national data on SMEs would be beneficial for wider SME disaster risk assessments and in the creation of cross-sectoral cooperation mechanisms (ADPC, 2017).

Another challenge includes the lack of common organization among SMEs which infringes their representation in policy and planning processes. Even though larger industries might have endeavoured in advocating for SMEs' in-

terests, more efforts in certain sectors are needed to accommodate SMEs' representatives in policy making, including those with women owners and operators (ADPC, 2017). This can be done by promoting the establishment of business associations to represent SMEs in certain areas or sectors. There are a few cases, such as the response during the Indian tsunami and the Great East Japan Earthquake, which illustrate the important role of business associations in leading and informing government-led strategy for disaster recovery (Villarroel et al., 2013). Moreover, SME's knowledge of specific risk reducing mechanisms, such as BCP, appears to be still rather low, though in surveys they have shown interest in receiving more information, training, and incentives to improve their preparedness and resilience. There are several opportunities which can be used to close this gap. For example, disaster risk awareness could be integrated into already existing general business trainings provided by governments and/or private sector, natural hazard risk assessments could be included in standard BCP/BCM procedures, and engagement with larger enterprises could provide mutual benefits through including SMEs in their supply chain, making SMEs more resilient to disasters (ADPC, 2017). In addition, instead of individual or company BCP, area or group BCP can also be initiated by sector or area to accelerate the establishment of risk assessment including reduction of the need of expert or human resources to build the assessment (Ono, 2014).

Lastly, risk financing mechanisms are still widely unavailable or out of reach for the majority of SMEs (including because of the lack of credit information) (ADPC, 2017; Torres, 2015). Currently governments' initiatives tend to focus more on SMEs access to capital (ADPC, 2017). However, more flexible small-scale risk financing, such as affordable disaster insurance products for SME market, are more needed (ADPC, 2017; Villarroel et al., 2013). Support from government through policies and engagement of private insurance sectors is a necessary step in improving the preparedness of SMEs (Japhta et al., 2016).

6. Conclusion

As the countries of Southeast Asia lie in one of the most disaster prone regions of the world, causing losses for millions of dollars each year, building disaster resilience for businesses and especially for small and medium companies, is crucial. SMEs, as the major provider of employment and as an important factor for the overall economic stability in Asia, require the special attention and efforts of national and local governments. Being the most vulnerable part of private sector, due to financial and capacity limitations, SMEs are in need of special targeted support through policies and legislation, aided by necessary infrastructure, investment climate, and direct interventions. Governments have, therefore,

a significant role in assisting SMEs to thrive and strengthen their business in the face of constant disaster risk (Ballesteros & Domingo, 2015). In order to ensure SMEs engagement in DRM efforts, governments also need to provide a number of relevant and adequate incentives, focused on reaching long-term sustainable involvement and solutions.

Current engagement of SMEs in disaster resilience in the three SEA countries of interest in this paper (Indonesia, Thailand, and Phillipines) is still relatively low. Some of the reasons are rooted in the fact that knowledge of risk management techniques is largely missing in SMEs. Other reasons include the lack of coordination among designated administrative bodies responsible for building resilience in small businesses, or the lack of sectoral SME organization and representation in local and national policies. Despite of the current low level of SME engagement, the governments in these countries have been improving their policies aimed at strengthening SME resilience. Some of these measures include raising awareness for BCP and other risk reduction mechanisms; promotion of disaster risk insurance through policies and collaboration between government and insurance companies (insurance pools fund and low premium disaster insurance for SMEs); provision of soft loans (for disaster recovery and flood protection systems); and tax benefits (tax exemptions before and after disaster for affected SMEs). However, a number of challenges still remain. Gaps in government responsibility, lack of data on SMEs and on hazard risks, lack of sectoral representation, knowledge gaps, and risk financing unavailability are among the important issues which require organized national and local effort. Mechanisms for inter-agency and public-private collaboration, improved SME databases, easy to understand and to follow administrative registration processes, establishing and supporting business associations for SMEs and inclusion in planning and decision making processes are some of the steps which governments can take to improve SME disaster resilience.

Finally, the potential of SMEs to play a significant role in wider community resilience needs to be realized and supported. Their close links with the community and specific expertise could be utilized through coordinated continuous policies, legislation and incentives. The meaningful inclusion of SMEs into DRR efforts would guarantee that societies in Asia are better prepared and more resilient to crises.

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